CASCADING STYLE SHEETS

PROGRAMAÇÃO WEB 1

OBJETIVOS DE APRENDIZAGEM

- Apresentar conceitos básicos sobre CSS

AGENDA

- Por que CSS?

- Possibilidades de uso do CSS

- Como CSS funciona?

POR QUE CSS?

- *Layouts* de sites precisos
- Especificação centralizada
- Acessibilidade
- CSS2 totalmente compatível em todos os navegadores e grande parte do CSS3

Possibilidades do CSS

http://www.csszengarden.com/

APLICANDO CSS

- Arquivo externo (.css)

  - ```html
    <head>
        <title>Jen's Kitchen</title>
        <link rel="stylesheet" href="kitchen.css" type="text/css" >
    </head>
    ```

- Embutido no HTML (`<style>`)

  ```html
  <head>
      <title>Required document title here</title>
      <style>
        /* style rules go here */
      </style>
  </head>
  ```

- Elemento individual (*inline*)

  ```html
  <h1 style="color: red; margin-top: 2em">Introduction</h1>
  ```

COMO CSS FUNCIONA?

- Estrutura CSS
- Conceitos

ESTRUTURA

- Folha de estilo
  - Conjunto de regras (rules)
    - Seletores (selectors)
    - Declaração (propriedade + valor)

```css
p {
  font-size: small;
  font-family: sans-serif;
}
```

```css
body {
  font-size: small;
  /* font-size:large; */
}
```

```css
h1 {
  color: green;
}
p {
  font-size: small;
  font-family: sans-serif;
}
```

EXERCÍCIO

- https://www.w3schools.com/w3css/tryit.asp?filename=tryw3css_default_intro

- Utilizar o Replit ou Spaces;

- Remover todos os estilos utilizados;

- Criar uma folha de estilo para a página acima com os seguintes requisitos:

  - Utilizar 3 seletores: `html, p e h1`

  - `html`

    - Definir a cor de fundo "snow" (`background-color: snow`)

    - Conjunto de fontes "Verdana" ou "Sans-serif" (`font-family: Verdana, sans-serif`)

    - Tamanho das fontes 15pixels (`font-size: 15px`)

    - Densidade ou peso das fontes "normal" (`font-weight: normal`)

  - `p`

    - Conjunto de fontes "Sans-serif" (`font-family: sans-serif`)

  - `h1`

    - Tamanho da fonte 36 pixels (`font-size: 36px`)

CONCEITOS

- Herança
- Conflitos
- *Box model*

HERANÇA

Unstyled paragraph — It's the *back* of the note that's driving me crazy.

```
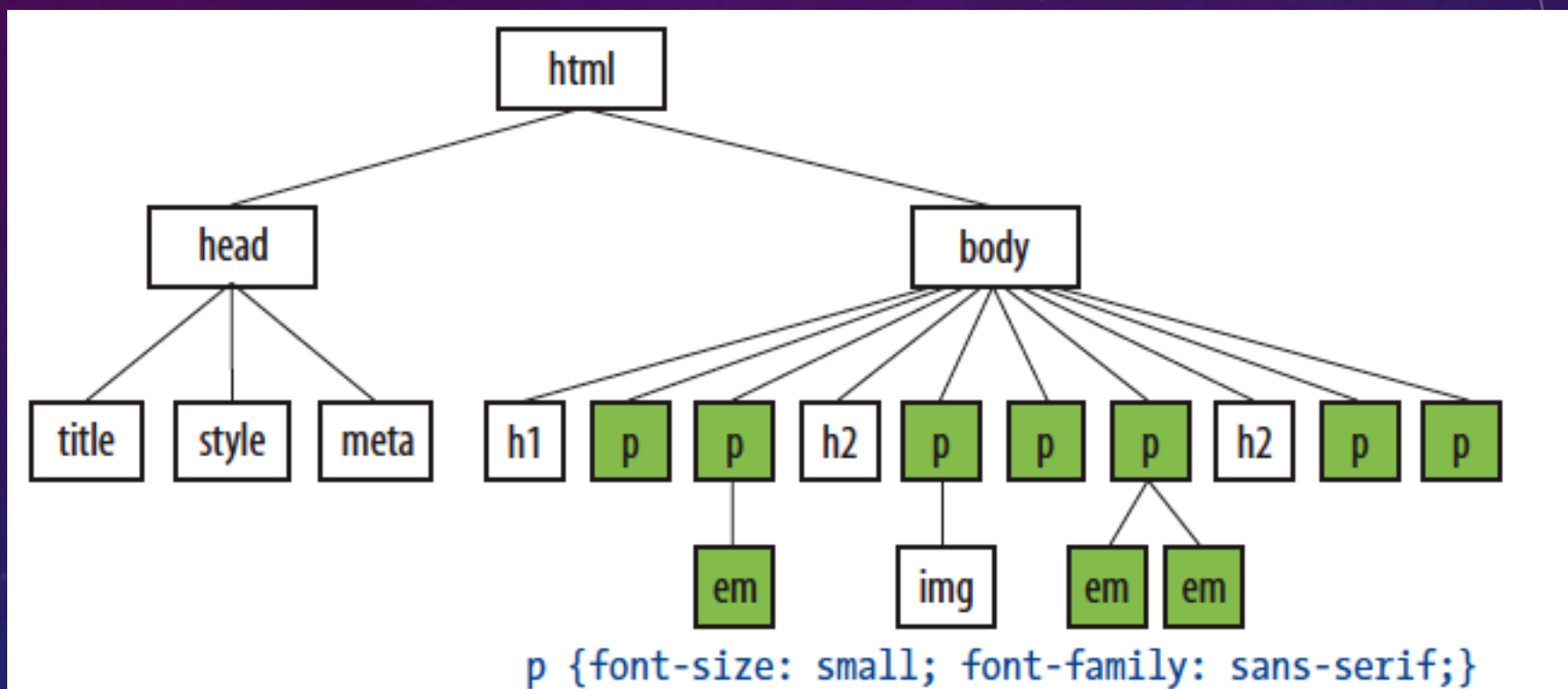p {font-size: small; font-family: sans-serif;}
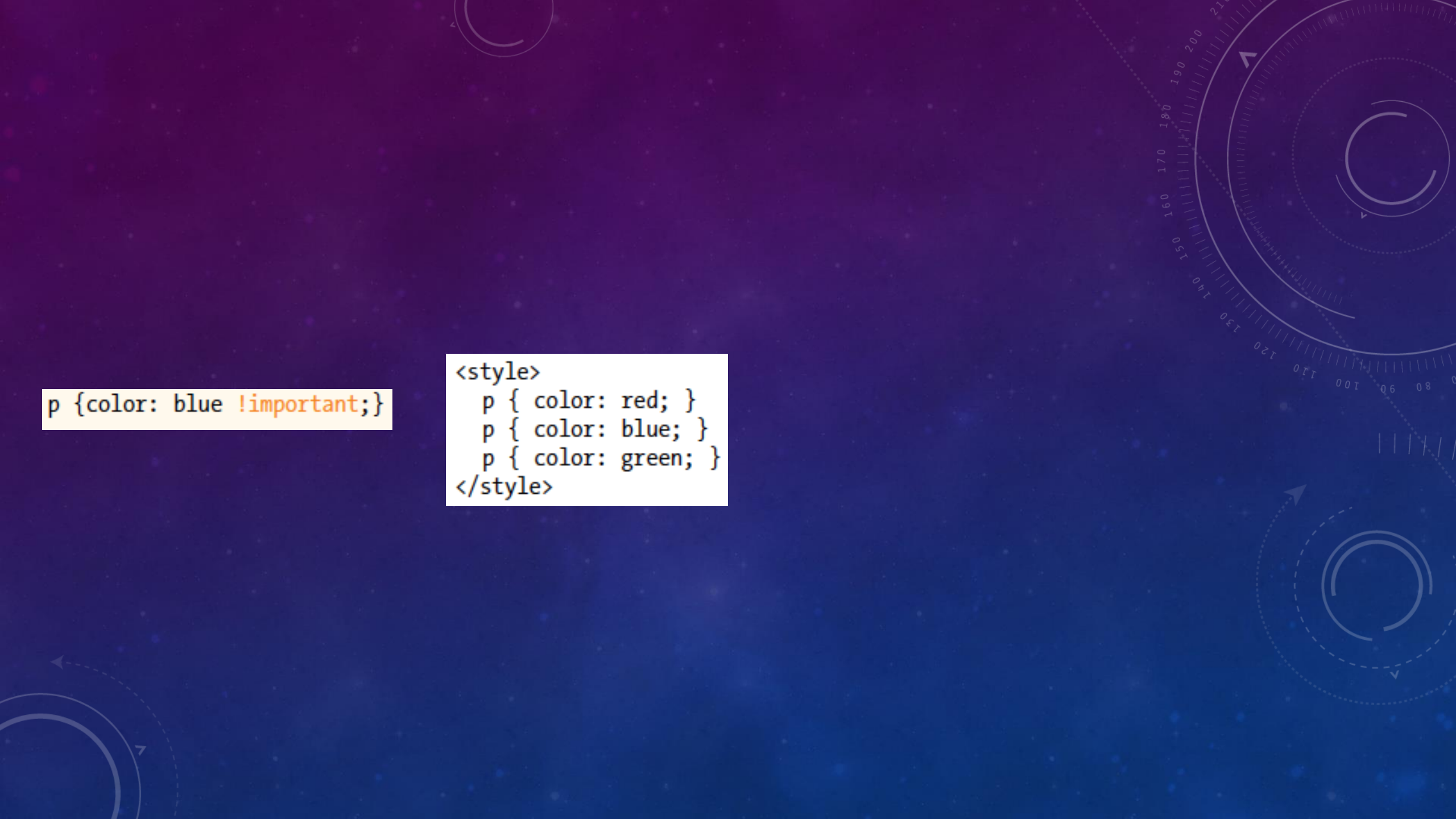```

Paragraph with style rule applied — It's the *back* of the note that's driving me crazy.

p {font-size: small; font-family: sans-serif;}

# CONFLITOS

- Podem existir conflitos em definições de estilo
- As folhas de estilo possuem uma hierarquia para resolver tais conflitos:
    1. Definições do navegador
    2. Definições de estilo do usuário (definido no navegador)
    3. Arquivo externo (`link`)
    4. Estilos embutidos (`style`)
    5. Estilos *inline*
    6. Regras marcadas com `!important`

```
p {color: blue !important;}
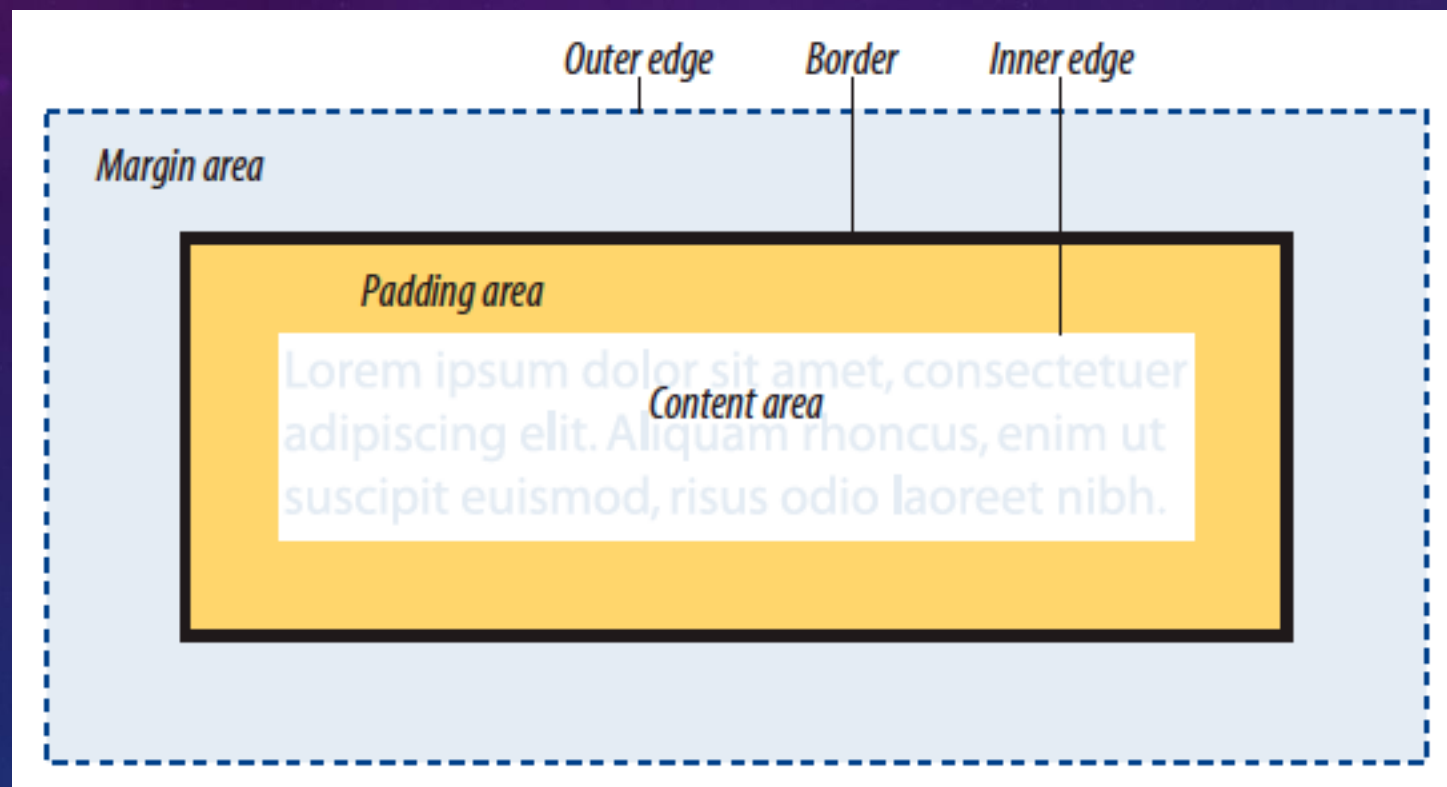```

```
<style>
  p { color: red; }
  p { color: blue; }
  p { color: green; }
</style>
```

ELEMENTO BOX

```
h1 { border: 1px solid blue; }
h2 { border: 1px solid blue; }
p { border: 1px solid blue; }
em { border: 1px solid blue; }
img { border: 1px solid blue; }
```

- Aplicar as regras mostradas ao lado ao exercício anterior
- O que é mostrado?
- Essa é a maneira como o navegador "entende" os elementos de uma maneira geral

ELEMENTO BOX

CONTENT-BOX

```
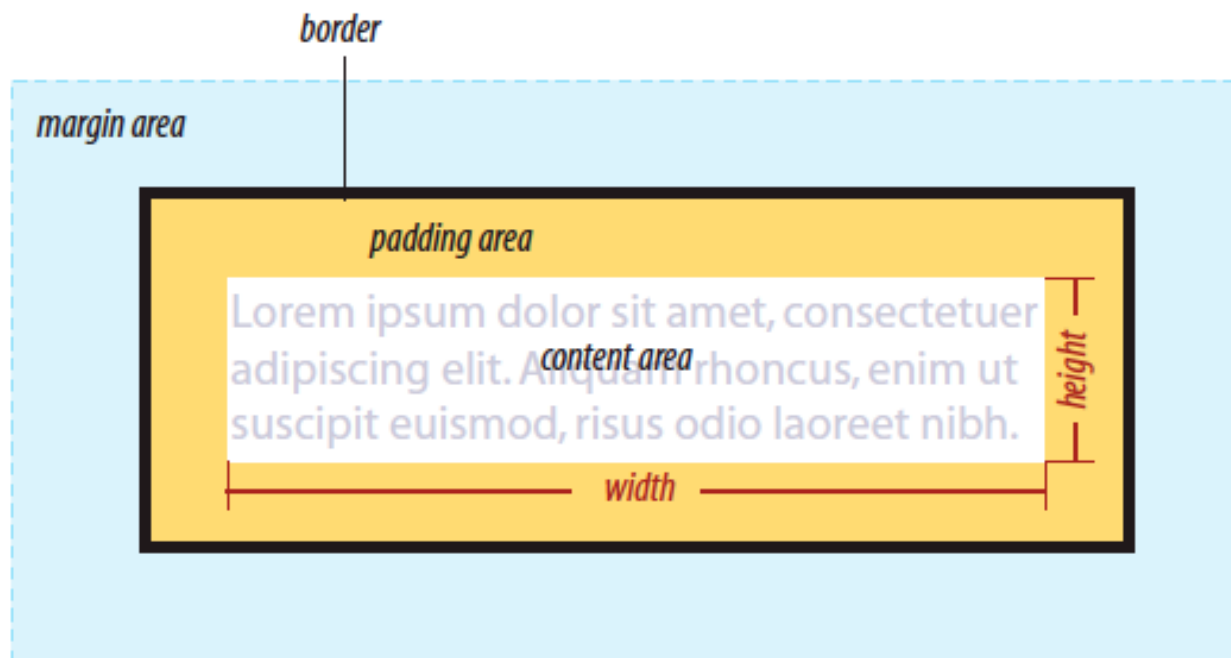p {
    background: #c2f670;
    width: 500px;
    height: 150px;
    padding: 20px;
    border: 2px solid gray;
    margin: 20px;
}
```

20px + 2px + 20px + 500px width + 20px + 2px + 20px = 584 pix

border

margin area

padding area

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content area

height

width

total visible box width = 544 pixels

width: 500px

Applying masks to the glasses is the most labor-intensive part of the process. Not only do you have to measure, place, and burnish on each mask, but you also need to completely cover the remainder of the glass in heavy paper. Any exposed areas (even inside) will get scratched by flying sand, so it has to be a good seal.

height: 150px

BORDER-BOX

- Maneira alternativa e mais intuitiva de especificar o tamanho das caixas

- `box-sizing: border-box`

- Aplica os valores de `width` e `height` para o box por completo

BORDER-BOX

```
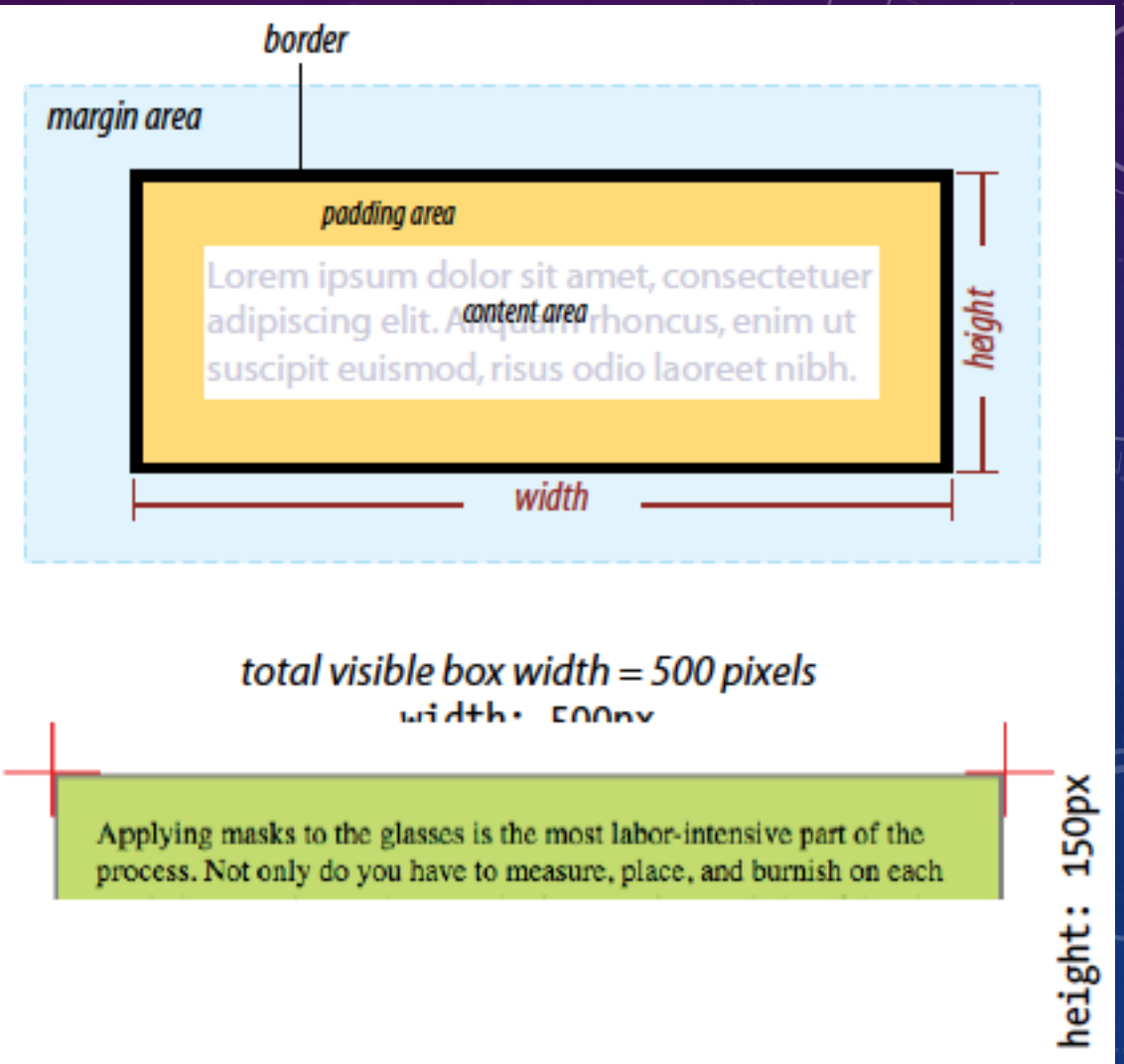p {
    ...
    -webkit-box-sizing: border-box;
    -moz-box-sizing: border-box;
    box-sizing: border-box;
    width: 500px;
    height: 150px;
}
```


border

margin area

padding area

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Aliquam rhoncus, enim ut suscipit euismod, risus odio laoreet nibh.

content area

height

width

total visible box width = 500 pixels

width: 500px

Applying masks to the glasses is the most labor-intensive part of the process. Not only do you have to measure, place, and burnish on each

height: 150px

TRATANDO ESTOURO

- Quando a especificação do tamanho do elemento é insuficiente ocorre o estouro (*overflow*) da exibição

- A maneira de tratar o estouro pode ser tratado pelo navegador é utilizando a propriedade `overflow` como mostrado a seguir

PADDING

- Espaço entre a área de conteúdo e a borda

- Comumente utilizado quando há cores de fundo e/ou bordas

- Pode ser especificado para todos os lados em conjunto ou individualmente, conforme mostrado


```
padding-top, padding-right, padding-bottom, padding-left
```

Values:	length measurement |percentage | inherit
Default:	0
Applies to:	all elements except table-row, table-row group, table-header-group, table-footer-group, table-column, and table-column-group
Inherits:	no

```
padding
```

Values:	length measurement | percentage | inherit
Default:	0
Applies to:	all elements
Inherits:	no

PADDING

```css
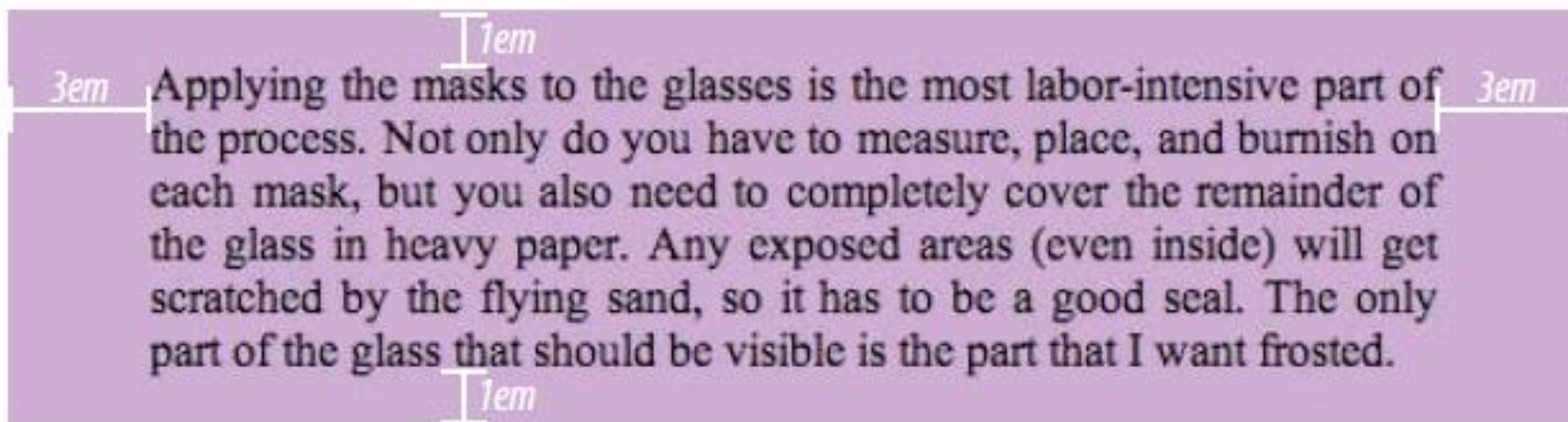blockquote {
    padding-top: 1em;
    padding-right: 3em;
    padding-bottom: 1em;
    padding-left: 3em;
    background-color: #D098D4;
}
```

1em

3em Applying the masks to the glasses is the most labor-intensive part of *3em* the process. Not only do you have to measure, place, and burnish on each mask, but you also need to completely cover the remainder of the glass in heavy paper. Any exposed areas (even inside) will get scratched by the flying sand, so it has to be a good seal. The only part of the glass that should be visible is the part that I want frosted.

1em

PADDING

```
padding: top right bottom left;
```

```
blockquote {
    padding: 1em 3em 1em 3em;
    background-color: #D098D4;
}
```

BORDERS

border-top-style, border-right-style,
border-bottom-style, border-left-style

Values:	none | dotted | dashed | solid | double | groove | ridge | inset | outset | inherit
Default:	none
Applies to:	all elements
Inherits:	no

BORDERS

```
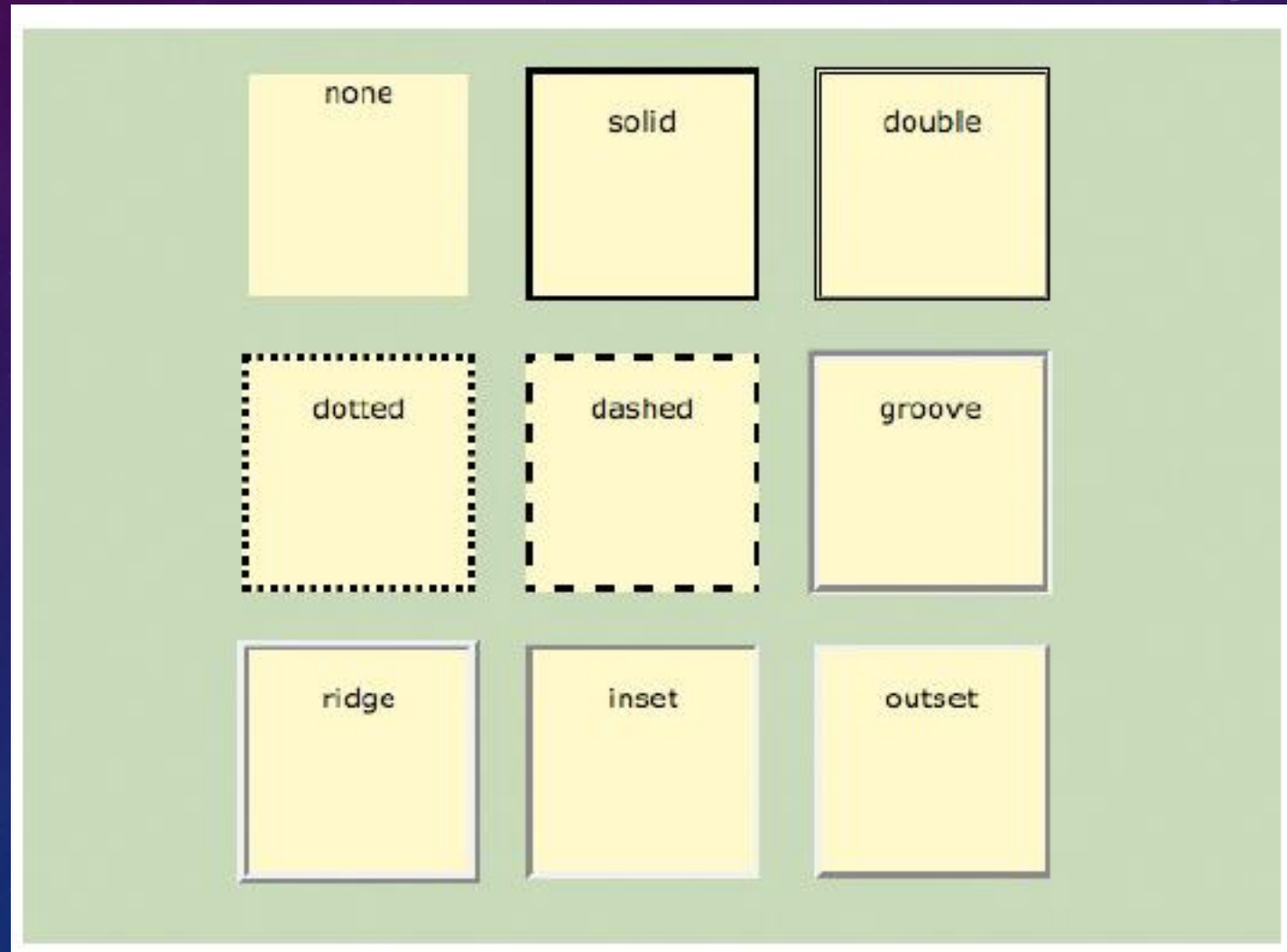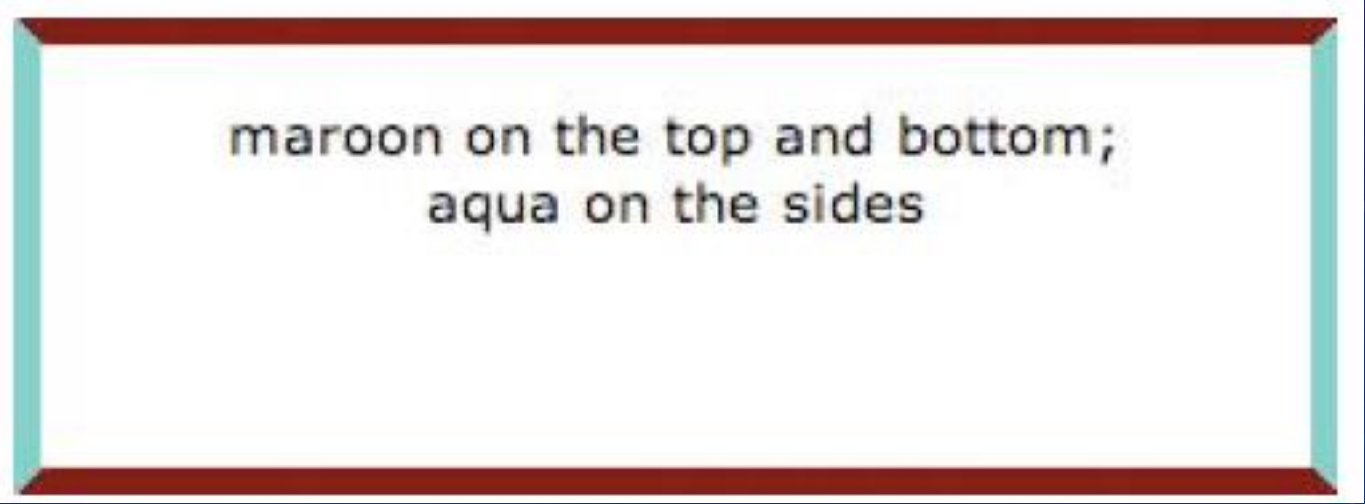div#help {
    border-top-width: thin;
    border-right-width: medium;
    border-bottom-width: thick;
    border-left-width: 12px;
    border-style: solid;
    width: 300px;
    height: 100px;
}
```

```
div#special {
    border-color: maroon aqua;
    border-style: solid;
    border-width: 6px;
    width: 300px;
    height: 100px;
}
```

maroon on the top and bottom;
aqua on the sides

MARGINS

- Espaço adicional além da borda
- Utilizado para ceder espaço para outros elementos, inclusive em colunas e criação de layouts de página em CSS

margin-top, margin-right, margin-bottom, margin-left

Values:	length measurement | percentage | auto | inherit
Default:	auto
Applies to:	all elements
Inherits:	no

margin

Values:	length measurement | percentage | auto | inherit
Default:	auto
Applies to:	all elements except elements with table display types other than table-caption, table, and inline-table
Inherits:	no

Applying the masks to the glasses is the most labor-intensive part of the process. Not only do you have to measure, place, and burnish on each mask, but you also need to completely cover the remainder of the glass in heavy paper. Any exposed areas (even inside) will get scratched by the flying sand, so it has to be a good seal.

`margin: 4em;`

After the blasting, the protective paper and the resist masks needs to be removed from the glasses. A cycle in the dishwasher finishes the job.

```
margin-top: 2em;
margin-right: 250px;
margin-bottom: 1em;
margin-left: 4em;
```

EXERCÍCIO

Criar uma folha de estilos CSS para o HTML criado no exercício anterior. Atualizar a estrutura criada no Replit (ou similar) com o estilo criado. Utilize a estrutura de diretórios mostrada abaixo para organizar seus arquivos.

index.html

styles   scripts   images

REFERÊNCIAS

- http://www.csszengarden.com/

- https://www.w3.org/Style/CSS/

- https://alistapart.com/

- https://www.thoughtco.com/css2-vs-css3-3466978